

Having described my invention I claim:

- 1 1. A surgical device for injecting a chemical agent within a subject for use in endoscopic
2 injection therapies, the device comprising:
 - 3 a. a support body;
 - 4 b. a motion transmitting unit comprising a first end portion proximal to said support
5 body and a second end portion remote from said support body, wherein said motion
6 transmitting unit is movable relative to said support body;
 - 7 c. an agent delivery system comprising:
 - 8 i. a needle remote from said support body having a hollow elongated body, a
9 first end for extending into a subject, and a second end fixed to said motion
10 transmitting unit second end portion; and
 - 11 ii. structure defining a conduit between said support body and said needle; and
 - 12 d. a guide housing for guiding said needle, said housing comprising a flexible
13 elongated body, an end portion proximal to said needle, an internal elongated passage and
14 friction reducing material lining said passage, wherein a part of said motion transmitting unit
15 adjacent said needle is slideably housed within said guide housing.
2. The device claimed in claim 1 wherein said motion transmitting unit comprises an
elongated flexible tube forming said conduit.
3. The device claimed in claim 1 wherein said motion transmitting unit comprises a
fitting movable with respect to said body for manually transmitting motion to said needle.
4. The device claimed in claim 1 wherein said motion transmitting unit comprises a first
member constructed from hypodermic needle stock and a second member constructed from
flexible tubing.

5. The device claimed in claim 1 wherein said agent delivery system comprises a syringe disposed adjacent to said support body for delivering a chemical agent to said needle located at a distal end of the device.

6. The device claimed in claim 1 wherein said guide housing is constructed from a helically wound wire spring forming an internal elongated passage, wherein a portion of said wire is coated with a friction reducing material.

7. The device claimed in claim 1 wherein said guide housing is constructed from a helically wound wire spring forming an internal elongated passage, wherein entire said wire is coated with a friction reducing material

8. The device in claim 1 wherein said agent delivery system comprises a return mechanism, said mechanism comprising a spring for returning said needle to a non-extended position.

9. The device claimed in claim 1 wherein said friction reducing material is Polytetrafluorethylene.

10. The device claimed in claim 1 wherein said guide housing is conditioned prior to use, whereby a length of said guide housing remains essentially fixed during routine use.

11. The device claimed in claim 1 wherein said support body is a molded plastic structure defining an internal passageway extending through said body and communicating with said conduit.

12. A surgical device for injecting a chemical agent within a subject for use in endoscopic injection therapies, the device comprising:
a. a support body defining an internal passageway extending through said body;

4 b. a motion transmitting unit comprising a first member proximal to said support body
5 and a second member, said unit moveable with respect to said body;

6 c. an agent delivery system comprising:

7 i. a needle remote from said support body having a hollow elongated body, a
8 first end for extending into a subject, and a second end fixed to said motion
9 transmitting unit second member; and

10 ii. structure defining a conduit between said support body and said needle; and

11 d. a guide housing for guiding said needle, said housing comprising a flexible
12 elongated body, said body comprising an end portion proximal to said needle, an internal
13 elongated passage and friction reducing material lining said passage, wherein at least a
14 portion of said motion transmitting unit second member adjacent said needle is flexible and
15 slideably housed within said guide housing.

13. The device claimed in claim 12 wherein said first member is constructed from
hypodermic needle stock and said second member is constructed from flexible tubing.

14. The device claimed in claim 12 wherein said guide housing is constructed from a
helically wound wire spring forming an internal elongated passage, wherein at least a part of
said wire is coated with a friction reducing material.

15. The device in claim 12 wherein said agent delivery system comprises a return
mechanism, said mechanism comprising a spring for returning said needle to a non-extended
position within said guide housing.

16. The device claimed in claim 12 wherein said friction reducing material is
Polytetrafluorethylene.

17. The device claimed in claim 12 wherein said guide housing is conditioned prior to use,
whereby a length of said guide housing remains essentially fixed during routine use such that
said needle is disposed within said guide housing when in a non-extended position.

1 18. A method of making a surgical device for injecting a chemical agent within a subject
2 for use in endoscopic injection therapies, the method comprising the steps of:
3 a. fabricating a helically wound wire spring coated with a low friction material to
4 form an internal passageway;
5 b. determining a desired length of a guide housing;
6 c. cutting said helically wound wire spring to an initial length to form a guide
7 housing, wherein said initial length is greater than said desired length;
8 d. assembling the device comprising the steps of:
9 i. providing a support body;
10 ii. inserting at least a portion of a motion transmitting unit within said body,
11 said unit comprising a first end portion proximal to said support body and a second
12 end portion remote from said support body, wherein said motion transmitting unit is
13 movable relative to said support body;
14 iii. providing an agent delivery system comprising a needle having a hollow
15 elongated body, a first end for extending into a subject and a second end fixed to said
16 motion transmitting member, and structure defining a conduit between said support
17 body and said needle;
18 iv. fixing said needle to said motion transmitting unit; and
19 v. sliding at least a portion of said motion transmitting unit adjacent said
20 needle within said guide housing; and
21 e. conditioning said guide housing prior to use of the device by manipulating the
22 guide housing to flatten the low friction material between the wire spring, so that the initial
23 length shortens to essentially the desired length.

19. The method claimed in claim 18 wherein the step of conditioning the guide housing
comprises repetitively coiling the guide housing in an alternating pattern until the initial
length shortens to essentially the desired length.

20. The method claimed in claim 18 wherein the step of conditioning the guide housing comprises axially compressing the guide housing under force until the initial length shortens to essentially the desired length.